

GP-303571

MEMBRANE ELECTRODE ASSEMBLY PREPARED BY DIRECT
SPRAY OF CATALYST TO MEMBRANE

ABSTRACT OF THE DISCLOSURE

A technique for fabricating an MEA. The technique includes providing a polymer electrolyte proton conducting membrane, and then spraying a catalyst ink directly on the membrane to form a catalyst layer. In one embodiment, the catalyst ink includes the proper ionomer to carbon ratio, such as 0.8/1, for the desired fuel cell performance. In another embodiment, the catalyst ink includes too little ionomer for the proper ionomer to carbon ratio for the desired fuel cell performance. An ionomer layer is sprayed on the membrane before the catalyst layer to provide the proper final ionomer to carbon ratio.